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Corporate Governance and Financial Performance in the Emerging Markets: Do ADRs Perform any Better than Non-Cross-Listed Firms?

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Abstract

We investigate the impact governance standards have on financial performance of firms operating across various political and socioeconomic regimes. Specifically, we examine the performance of non-cross-listed emerging market firms that implement corporate governance standards similar to those mandated of firms listed on US exchanges. Using cross-sectional time-series analysis, we find that a more rigorous corporate governance structure is associated with better performance (as measured by return on assets (ROA)) among non-cross-listed firms. Cross-listed firms, whose common stock trades as American Depositary Receipts (ADRs) and who are subject to the same listing requirements as domestic US firms, exhibit no evidence of improved performance. We also find that the positive performance effect of improving corporate governance is mitigated among firms with higher market risk (i.e., beta).

Keywords: corporate governance, financial performance, market risk, emerging markets, American depository receipts (ADRs)

1. Introduction

Since the passage of the Sarbanes-Oxley Act (SOX) in 2002 and stiffened restrictions imposed by the US Securities and Exchange Commission in 2003, corporate governance in the US has been significantly strengthened. A substantial amount of research into the impact of these governmental initiatives indicates that American firms have exhibited enhanced board oversight with more effective control systems, reduced their risk taking and experienced an increase in value [1–7]. A number of researchers have also investigated the relationship between these more stringent governance rules and the financial performance of publicly

held corporations trading in US markets, as well as the performance of firms operating under a more rigorous governance environment in other developed countries [8–11]. However, the relationship between corporate governance and the performance of firms operating in the emerging markets has drawn little attention [12–15], while the comparison of cross-listed emerging market (EM) firms issuing American Depositary Receipts (ADRs), that are required to abide by SEC restrictions, and non-cross-listed EM firms have received even less [16–19]. In this study, we address the governance – performance relationship for cross-listed (ADR) firms trading on US markets and non-cross-listed EM firms. To do this we use the corporate governance score of companies that is provided by the *Bloomberg Professional* database and corporate governance rules mandated by the *New York Stock Exchange* (NYSE) or the *National Association of Securities Dealers Automated Quotations* (NASDAQ) for firms trading on their exchanges; the rules are identified in Section 303A of the NYSE's Listed Company Manual.

Investors have shown an increasing interest in emerging market countries in recent years. Despite the many evident problems associated with political instability, lacking infrastructure and uncertain property rights protections, the latent potential for substantial growth in these untapped markets is clearly present. Both corporate leaders and politicians have begun to signal their recognition that the influx of capital is the key to sustained economic development and growth. To attract this requisite capital in a competitive global economy, more robust corporate governance standards are beginning to evolve; either by government mandate or through self-imposed corporate standards. To examine the impact of enhanced governance standards on corporate performance, we focus on firms operating in countries identified by Bloomberg's 2014 Emerging Market rankings for which there are available data. In this study we apply a two-step Generalized Least Squares (GLS), random effects model and company specific data on a large sample of firms over the 2008–2014 period.

Given that emerging market countries are endeavoring to compete for a slice of the global economic pie, this study provides both theoretical insight and practical relevance related to international corporate governance practices and the impact it has on creating and maintaining investor confidence. We find that stronger governance is associated with higher financial performance among the non-cross-listed EM firms, but we were unable to find any significant evidence for the cross-listed ADRs. Furthermore, CEO duality has a negative impact on financial performance only for ADR firms, while none of the other governance standards have a significant effect on firm performance. Finally, among cross-listed firms, it appears to be important to separate the chief executive's position and authority from that of the chairman of the board, so that the authority of the board of directors (BOD) is not usurped or mitigated. This is important because it strengthens the mechanisms used to monitor management, which leads to enhanced financial performance. A CEO lacking appropriate oversight by the BOD may have the incentive and certainly the ability to accept investments that are self-benefitting, but prove harmful to the firm in the long run [20, 21]. Finally, the findings also reveal that market risk negatively moderates the governance-performance relationship in the emerging markets. As a firm's market risk increases, the positive effect on financial performance associated with strengthening corporate governance significantly declines. The results indicate that strong corporate governance is an important element toward improving

financial performance among EM firms; however, reducing the risk of an equity investment and controlling for stock price volatility is of primary importance for investors.

2. Conceptual framework and hypotheses development

2.1. Corporate governance and financial performance

SOX (2002) was established in an effort to mitigate, if not completely eliminate, major corporate scandals. The SEC implemented the new law in 2006 in the form of enhanced corporate governance standards, which are codified in Section 303A of the NYSE's Listed Company Manual and the NASDAQ's Rule 4000 and apply to cross-listed ADRs (in particular to level 2 and 3 ADRs) as well as US domiciled firms. Bonding Theory provides an explanation for the voluntary adoption of these rather rigorous, "best practice" governance rules among EM firms. EM firms have an incentive to "bond" to a regulatory regime with higher standards than their own markets in an attempt to signal a commitment to these standards [22]. From this perspective, US governance directives serve as a global model of "best practices," providing a codified benchmark of corporate transparency, which restrains the self-serving behavior of all stakeholders as well as management [23].

Global investors typically are skeptical when EM firms exhibit good performance, because they are concerned about the accuracy and consistency of their financial reports. In order to provide confidence and attract investors, some emerging markets companies have made impressive strides in their governance over the last decade by "bonding" their companies to globally accepted best practice rules [24]. However, the impact of this improved corporate governance on firm performance remains ambiguous in the extant literature. For example, Brown and Caylor [9] create a corporate governance measure for US firms based on 51 firm-specific provisions over the 2003–2005 period and show that the governance score is significantly and positively related to a firm's value. Chhaochharia and Grinstein [3] run an event study over the post-SOX (2002) announcement period across US firms and, in contrast to Brown and Caylor [9], observe that firms that are less compliant with the new corporate governance rules earn positive abnormal returns compared to firms that are less compliant. Similarly, Aebi et al. [8] examine corporate governance mechanisms and firm performance for the US banking industry during the crises 2007–2008 and show that corporate governance factors (i.e., board independence and board size) are not statistically significant and/or are negatively related to performance. Among cross-listed ADRs, Litvak [18] also finds similar findings to that of Aebi et al. [8]. By comparing the stock price reaction of SOX-exposed ADRs to SOX-unexposed foreign firms, Litvak [18] observes that the impact of SOX on ADRs is negative and that firms that rigorously apply the governance standards experience the greatest declines in their stock prices.

The results reported regarding the governance-performance relationship for US firms as well as ADRs reveal that countries with more developed financial markets do not react significantly to a change in the governance regime. This is partly related to the fact that the costs of complying with these rules outweigh the benefits in markets that are already heavily regulated [3, 18, 19]. In comparison to developed markets, financial markets in emerging countries are relatively

inefficient and incomplete. However, in order to compensate for the negative perception of their riskier market conditions, the emerging markets have provided incentives in an effort to strengthen corporate governance so that the interests of all stakeholders are protected (i.e., investors and creditors) [25]. It follows then that we expect that stronger governance to have a positive effect on financial performance among EM firms. Also, based on the evidence in the extant literature, we do not expect to find a significant relationship between governance and performance among cross-listed ADRs. Therefore, we hypothesize the following:

H1: Stronger corporate governance will increase financial performance in the emerging markets over time.

2.2. The individual corporate governance standards and their impact on financial performance

In addition to examining firms' overall corporate governance score with respect to financial performance, in this study we further investigate the impact of four individual governance standards. Three of these standards (i.e., board independence, establishing a formal ethics policy and three committees) are compulsory for all public US firms as well as cross-listed ADRs trading on the NYSE or NASDAQ. While US governance standards are not mandatory for the EM firms, in an effort to minimize the potential for conflicts of interest between major and minority shareholders and to build trust among potential foreign investors, voluntary adoption of these standards has increased during the last decade [26, 27].

While SOX (2002) mandates that listed firms have a majority of independent directors, US governance rules do not require the CEO and the chairman of the board to be held separately. Nonetheless, over the last 10 years, it appears as though American companies began providing a clearer distinction between the responsibilities of management and the board [28, 29]. The academic literature seems to support the distinction: CEOs simultaneously holding the position of chairman of the board are more likely to select board members who fail to qualify as independent [30–32]. Furthermore, separating the CEO role from that of the chairman also separates the interests of the CEO from that of the shareholders [33].

The emerging markets literature is mixed with regard to the impact of Independent Directors and CEO Duality on firm performance. Black et al. [34] examines the relationship between board independence and performance, as measured by Tobin's Q , and finds a positive association between the two variables in Korea, a negative association in Brazil and no association in India. Similarly, Mahadeo [35] uses survey data to test the impact of board diversity on the short-term performance of firms trading on the exchange of Mauritius and finds that a higher proportion of independent directors negatively impacts performance. Nonetheless, the results also provide evidence that companies in Mauritius have been employing "best practices" corporate governance since a mandated code change in 2005. In this case, "best practices" include increasing the number of independent directors and appointing independent board chairpersons to avoid CEO duality. Moreover, Ramdani and Witteloostuijn [36] examine the effect of board independence in addition to CEO duality on the performance of firms in Indonesia, Malaysia, South Korea and Thailand. They find that both having a greater percentage of independent directors on the board and CEO duality positively affects

performance. The authors also observe that board size has a negative moderating impact on the positive relationship between CEO duality and performance.

An application of Bonding Theory leads us to expect that EM firms will likely converge toward a corporate governance structure consistent with that of the US, thereby voluntarily subjecting themselves to a rigorous set of “best practices” rules. Moreover, in this study, we scrutinize the governance – performance relationship over a longer term. Although the short-term effect of these standards on performance might diverge, we expect that, given enough time, EM firms will converge toward a US governance structure, regardless of any compulsory standard. Given that CEO duality is negatively associated with strong corporate governance structure, while board independence is positively associated with strong governance among US firms, we expect to find a positive relationship between strong governance and performance in the emerging countries, and hypothesize the following:

H2: A higher proportion of independent directors on the board will increase the financial performance of EM firms over time.

H3: CEO duality will result in decreased financial performance for EM firms over time.

In accordance with SOX (2002), listed companies in NYSE and NASDAQ must have nomination, compensation and audit committees to identify potential courses of action for the board of directors [37]. The nomination committee directs the process governing board appointments and provides recommendations regarding candidates for directory positions [38]. The compensation committee exists to oversee the process by which bonuses and salaries are awarded to senior executives or other employees to prevent gratuitous compensation. The board of directors relies on audit committees to manage internal controls, risk management and financial reporting. In general, committees are assigned specific roles and responsibilities with the intention of improving a firm’s governance and enhanced governance should increase investor returns through higher stock prices. Research suggests that there is a positive association between the committee structure of boards and firm performance among US firms [39]. Still, studies also reveal that as the percentage of outsiders on these boards increases, financial performance decreases [40]. On the whole, there remains a considerable gap in the governance literature and therefore little guidance for policymakers regarding the importance of board committees for effectively enhancing firm performance [41].

According to SOX (2002), listed firms also are required to establish a well-defined ethics policy and code of conduct for directors, officers and employees that clearly identifies the applicable rules of behavior as well as the various responsibilities of every employee in the organization. Donker et al. [42] examines the relationship between the corporate ethics behavior of firms and the performance of Canadian firms listed on the Toronto Stock Exchange. They find that by establishing a code of ethics, a company increases profitability. If a firm applies a code of ethics effectively, individual and organizational dilemmas can be resolved promptly. This, in turn, increases the efficiency of the decision-making process. Furthermore, corporations that effectively apply an ethics policy improve their image and reputation, which likely produces a positive effect on financial performance. Overall, we expect that EM firms will adopt a bonding strategy and subject themselves to a more robust governance structure, resulting in the establishment of a greater number of committees that support the board of directors.

Additionally, firms will forge formal ethics policies to enhance the decision-making process as well as their market image. In line with the findings in the extant literature, and following Bonding Theory, we hypothesize the following:

H4: EM Firms with a greater number of committees will exhibit better financial performance over time.

H5: EM firms with formal ethics policies will exhibit better financial performance over time.

2.3. The moderating effect of risk on governance-performance relationship

Prior literature documents a negative relationship between contemporaneous risk and governance; perhaps because establishing an effective corporate governance regime protects shareholders and creditors and serves to reduce the expropriation of power by managers and controlling shareholders [43–45]. Earlier studies also document risk as an important determinant of a firm's financial performance [46, 47]. For firms in the emerging markets, however, identifying an appropriate measure of risk can present problems when estimating the cost of capital because of the time-varying nature of the integration of these markets into the global economy. Nonetheless, the exposure of a firm to the risks inherent in its local market remains an important element of the overall risk assessment [48–50]. Although, research has demonstrated that both market risk and governance have a significant impact on the financial performance of firms, it remains necessary to develop a more complex and dynamic theoretical model than has been previously considered; a model that reflects how market risk moderates the governance-performance relationship in the emerging markets. We therefore posit the following hypotheses for each of the aforementioned governance indicators:

H6: Greater market risk negatively moderates the relationship between an EM firm's governance score and its financial performance over time.

H7a: Greater market risk negatively moderates the relationship between an EM firm's independent directors and its financial performance over time.

H7b: Greater market risk positively moderates the relationship between CEO Duality and financial performance among EM firms over time.

H7c: Greater market risk negatively moderates the relationship between number of committees and financial performance among EM firms over time.

H7d: Greater market risk negatively moderates the relationship between the presence of an ethics policy and financial performance among EM firms over time.

3. Empirical study

3.1. Data and variable measurement

In this study we analyze the impact of corporate governance on the financial performance of a sample of EM firms and ADRs based in 22 emerging countries over a period extending

from 2008–2014. Our analysis is restricted to this seven-year period because of the scarcity of reliable governance data before 2008. The countries are drawn from the 22 best performing emerging markets for the year 2014, as ranked by the *Bloomberg Visual Data*. The ranking is based on each country's GDP growth, inflation, the level of government debt, the annual change in government debt, currency purchasing power, and total investment as percentage of GDP. The 22 emerging countries in ranked order are: China, South Korea, Malaysia, Chile, Thailand, Panama, Peru, Latvia, Poland, Czech Republic, Columbia, Turkey, Hungary, Russia, Brazil, Philippines, Mexico, Indonesia, South Africa, Morocco, India and Egypt. Unfortunately, Morocco, Latvia, Egypt and the Czech Republic have been dropped from the sample because of missing firm-year observations. Moreover, our sample of ADRs excludes Malaysia, Chile, Thailand, Panama, Peru, Poland, Colombia, Philippines and India, either because these ADRs do not exist or because the data are missing for these countries. In total, the sample comprises 10,045 non-cross listed EM firm-year observations of companies that are publicly traded on the stock market of 18 EM countries and 610 cross-listed ADR firm-year observations of companies trading on the NASDAQ and NYSE in the US.

The financial and corporate governance data on the EM firms and ADRs were accessed through the *Bloomberg Database*. Financial performance is measured by the return on assets ratio (ROA), estimated by dividing a company's annual net income by its total assets. In the literature, ROA is frequently used as a measure for profitability and financial performance, especially in studies investigating corporate governance structure [51–53]. A firm's Governance Score was attained from the Bloomberg Professional database and is based on the extent of a company's governance disclosure, where the score ranges from 0.1 for companies that disclose a minimum amount of governance data to a maximum of 100. The *Independent Directors* variable is measured as the number of independent directors on the board divided by the board size; *Committees* is measured as the total number of committees (including audit, nomination and compensation committees) established by the company and ranges between a value of 0 and 3; *CEO Duality* is employed as a dummy variable that takes a value of 1 if the CEO of the company also serves as the chairman of the board and 0 otherwise; *Ethics policy* also is a dummy variable that takes a value of 1 if the company has a formal ethics policy and 0 otherwise. Finally, we include a market-based measure of risk, the CAPM-beta, as a moderator between governance and performance, because of its frequent use in the literature [30, 43, 44, 54]. For each firm, beta (β_i) is estimated for each year t based on daily stock prices: a beta greater than 1 indicates that a stock is more volatile than the market.

To control for potentially confounding, exogenous factors, we include a number of company, industry and country-level variables. At the firm level, we control for leverage because of its significant impact on performance through the cost of capital and capital budgeting decisions [55, 56]. Leverage is measured as the ratio of total debt to total assets. We also include Tobin's Q to control for investment and growth opportunities, because it diverges considerably across countries and captures important elements of firm performance [57, 58]. Tobin's Q is measured as the sum of a firm's market capitalization, total liabilities, preferred equity and minority interest divided by total assets. We also control for firm size, which is computed as the log of a firm's total assets. Industry effects are captured using nine indicator variables; one for each Industry Classification Benchmark (ICB) code. The nine relevant industries

include oil and gas, basic materials, industrials, consumer goods, health care, consumer services, telecommunications, utilities, financials and technology. Finally, we employ an indicator variable for each country to control for possible fixed effects related to the national origin of a firm.

3.2. Descriptive statistics and correlations

Descriptive statistics for the cross-listed ADRs and non-cross listed EMs are presented in **Table 1**. The results show that ADR firms generate a higher governance disclosure score than the EM firms. Also, cross-listed ADRs tend to have a larger proportion of independent board members, are almost twice as likely to have a formal ethics policy as EM firms and tend to have more committees. Conversely, EM firms are much more likely to have a CEO that also serves as chairman of the board (i.e., CEO duality). In comparing the estimated betas of the two groups of firms, it becomes apparent that ADRs are riskier than EM firms, but this may stem from the residual elements of local market segmentation [48–50]. Finally, the profitability of EM firms appears greater over this period than that of the ADR firms, suggesting that there is a notable difference, not only in the governance structure of these firms, but also in the performance between cross-listed ADRs and non-cross-listed EM firms.

| Variables | Mean | Median | Std. Dev. | %25 | %75 |
|-----------------------|--------|--------|-----------|--------|--------|
| EM firms | | | | | |
| ROA | 6.161 | 5.006 | 9.139 | 1.922 | 9.818 |
| Governance score | 46.844 | 44.643 | 7.742 | 42.857 | 51.786 |
| Committees | 2.074 | 2 | .966 | 1 | 3 |
| Independent directors | 44.178 | 42.860 | 13.739 | 33.333 | 54.550 |
| CEO duality | 0.237 | 0 | 0.425 | 0 | 0 |
| Ethics policy | 0.433 | 0 | 0.496 | 0 | 1 |
| Leverage | 0.237 | 0.200 | 0.179 | 0.093 | 0.346 |
| Firm size | 7.203 | 7.156 | 2.082 | 5.850 | 8.487 |
| Tobin's Q | 0.424 | 0.300 | 0.607 | 0.020 | 0.751 |
| Beta | 0.954 | 0.972 | 0.738 | 0.781 | 1.141 |
| ADRs | | | | | |
| ROA | 5.633 | 4.895 | 9.370 | 1.285 | 9.151 |
| Governance score | 50.248 | 50 | 9.560 | 42.857 | 57.143 |
| Committees | 2.219 | 3 | 0.953 | 1 | 3 |
| Independent directors | 48.063 | 44.444 | 19.784 | 33.333 | 62.500 |
| CEO duality | 0.160 | 0 | 0.368 | 0 | 0 |
| Ethics policy | 0.827 | 1 | 0.379 | 1 | 1 |

| Variables | Mean | Median | Std. Dev. | %25 | %75 |
|-----------|-------|--------|-----------|-------|--------|
| Leverage | 0.217 | 0.182 | 0.167 | 0.084 | 0.313 |
| Firm size | 9.510 | 9.266 | 1.648 | 8.463 | 10.276 |
| Tobin's Q | 0.328 | 0.166 | 0.543 | 0.005 | 0.588 |
| Beta | 1.080 | 1.060 | 0.330 | 0.888 | 1.244 |

This table provides descriptive statistics for the cross-listed ADRs and non-cross listed EM firms in the sample. A firm is defined cross-listed if it was continuously cross-listed in the US market for the period 2008–2014. All cross-listed and non-cross listed firms are publicly traded EM firms that are from *Bloomberg's* Best Emerging Markets 2014 list.

Table 1. Descriptive statistics cross-listed ADRs and non-cross-listed EM firms.

The Pearson correlation coefficients and corresponding significance levels are reported in **Table 2**. Prior to estimating the determinants of financial performance presented in the theory and hypotheses above, we perform a preliminary screening for collinearity. **Table 2** reveals no evidence of collinearity among the independent variables; no Pearson correlation exceeds $|0.418|$ and the variance inflation factors in later multivariate estimations remain small. Moreover, in line with the theory, the correlation estimates indicate that the Governance Score, Independent Directors, the Number of Committees and CEO Duality are significantly and positively correlated with financial performance ($p < 0.01$), while the coefficient estimate on CEO Duality is negative but insignificant. An examination of the correlation estimates between risk, performance and governance, reveals that the estimated betas are positively and significantly correlated with CEO Duality ($p < 0.10$) and the Number of Committees ($p < 0.05$), while they are negatively correlated with Ethics Policy. Although we expect a negative correlation between risk and the Number of Committees, the positive correlation might be related to the relatively large size of the firms establishing a greater number of committees. That is, given the positive and significant correlation between firm size and risk ($p < 0.01$), a positive correlation between risk and the Number of Committees is not surprising.

3.3. Empirical model

In this study a two-step Generalized Least Squares (GLS) random effects model is employed to capture both cross-sectional and time-series variation in the data. We implement a double transformation of the data to correct for autocorrelation as well as potential heteroskedasticity problems, in which the data are corrected for unobservable, firm-specific and time-invariant effects [59, 60]. The Two-step GLS random effects regression analyses are specified from a general model that represents return on assets (ROA), our proxy for financial performance, as a function of various corporate governance indicators and control variables. In the first model, financial performance is defined as a function of an overall governance disclosure score as shown in Eq. (1):

$$ROA_{it} = \beta_0 + \beta_1 \text{Governance_Score}_{it} + \text{Controls}_{it} + \varepsilon_{it} \quad (1)$$

| | ROA | Governance score | Committees | Board independence | CEO duality | Ethics policy | Leverage | Firm size | Tobin's Q | Beta |
|-----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|
| ROA | 1.000 | | | | | | | | | |
| Governance Score | 0.097 | 1.000 | | | | | | | | |
| | 0.000 ^a | | | | | | | | | |
| Committees | 0.034 | 0.327 | | | | | | | | |
| | 0.009 ^a | 0.000 ^a | 1.000 | | | | | | | |
| Independent Directors | 0.039 | 0.226 | 0.263 | | | | | | | |
| | 0.002 ^a | 0.000 ^a | 0.000 ^a | 1.000 | | | | | | |
| CEO Duality | -0.001 | -0.062 | 0.021 | 0.107 | | | | | | |
| | 0.943 | 0.000 ^a | 0.103 ^c | 0.000 ^a | 1.000 | | | | | |
| Ethics Policy | 0.047 | 0.418 | 0.146 | 0.172 | -0.021 | | | | | |
| | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.110 | 1.000 | | | | |
| Leverage | -0.161 | -0.119 | -0.012 | -0.031 | 0.065 | -0.094 | | | | |
| | 0.000 ^a | 0.000 ^a | 0.342 | 0.018 ^b | 0.000 ^a | 0.000 ^a | 1.000 | | | |
| Firm Size | -0.019 | 0.402 | 0.210 | -0.054 | -0.143 | 0.215 | -0.133 | | | |
| | 0.144 | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.000 ^a | 1.000 | | |
| Tobin's Q | 0.303 | -0.025 | -0.117 | -0.161 | -0.056 | -0.007 | 0.042 | -0.138 | | |
| | 0.000 ^a | 0.054 ^b | 0.000 ^a | 0.000 ^a | 0.000 ^a | 0.599 | 0.001 ^a | 0.000 ^a | 1.000 | |
| Beta | -0.053 | -0.001 | 0.028 | -0.017 | -0.021 | -0.026 | -0.008 | 0.122 | -0.025 | |
| | 0.000 ^a | 0.951 | 0.029 ^b | 0.198 | 0.103 ^c | 0.046 ^b | 0.526 | 0.000 ^a | 0.053 ^b | 1.000 |

This table provides Pearson Correlation coefficients and corresponding *p*-values for the cross-listed ADRs and non-cross listed EM firms in the sample.

^aSignificance at the 0.01 level.

^bSignificance at the 0.05 level.

^cSignificance at the 0.10 level.

Table 2. Pearson correlation for the full sample.

In the second model, each of four governance variables are incorporated into the governance – performance regression for each of the samples as in Eq. (2):

$$ROA_{it} = \beta_0 + \beta_1 CEO_Duality_{it} + \beta_2 Independent_Directors_{it} + \beta_3 Committees_{it} + \beta_4 Ethics_Policy_{it} + Controls_{it} + \varepsilon_{it} \quad (2)$$

The third model introduces beta as a moderator variable for risk into the governance-performance regression and includes an interaction variable for the governance disclosure score with Beta as exhibited in Eq. (3):

$$ROA_{it} = \beta_0 + \beta_1 Governance_Score_{it} + \beta_2 Beta_{it} + \beta_3 Beta_{it} * Governance_Score_{it} + Controls_{it} + \varepsilon_{it} \quad (3)$$

Finally in the fourth model, we employ a moderator variable, the CAPM Beta. This governance-performance regression includes an interaction term for each of the four governance indicators with Beta as displayed in Eq. (4):

$$ROA_{it} = \beta_0 + \beta_1 CEO_Duality_{it} + \beta_2 Independent_Directors_{it} + \beta_3 Committees_{it} + \beta_4 Ethics_Policy_{it} + \beta_5 Beta_{it} + \beta_6 Beta_{it} * CEO_Duality_{it} + \beta_7 Beta_{it} * Independent_Directors_{it} + \beta_8 Beta_{it} * Committees_{it} + \beta_9 Beta_{it} * Ethics_Policy_{it} + Controls_{it} + \varepsilon_{it} \quad (4)$$

As discussed in the Data and Variable Measurement section, the sample employed to estimate Eqs. (1) and (3) comprise 10,045 non-cross listed EM firm-year observations and 610 cross-listed ADR firm-year observations. However, in Eqs. (2) and (4), the sample is reduced to 5709 non cross-listed EM firms and 324 ADRs, as a result of missing observations for the four corporate governance indicators.

4. Results

4.1. The direct effect of governance factors on financial performance

To test hypotheses 1 through 5, we examine the influence of governance on firm performance using Eqs. (1) and (2). The results of estimating of Models (1) and (3) are presented in **Table 3** and reveal the impact of the governance score on the financial performance (i.e., ROA) of EM firms and ADRs, respectively. The estimate of Model (1) provides evidence supporting hypothesis 1 in that an increase in the governance score ($p < 0.05$) is likely to increase the financial performance of an EM firm, while the estimate of Model (3) shows a positive but insignificant coefficient on the governance score variable for the ADRs. The estimates of Models (2) and (4) provide the results of the four corporate governance indicators on financial performance for EM and ADR firms, respectively. Model (2) reveals no evidence of a relationship between the individual corporate government variables and performance for EM firms. Model (4), however, shows that CEO Duality negatively affects the financial performance of cross-listed ADR firms ($p < 0.10$).

| | EM firms | | ADRs | |
|------------------------|----------------------|----------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) |
| Governance score | 0.010** (0.005) | | 0.009 (0.014) | |
| Committees | | 0.002 (0.006) | | 0.000 (0.028) |
| Independent directors | | -0.004 (0.012) | | -0.006 (0.035) |
| CEO duality | | 0.013 (0.017) | | -0.122* (0.065) |
| Ethics policy | | -0.011 (0.016) | | -0.078 (0.077) |
| Leverage | -0.088*** (0.005) | -0.086*** (0.008) | -0.094*** (0.029) | -0.146*** (0.034) |
| Firm size | 0.060*** (0.009) | 0.081*** (0.012) | -0.042 (0.041) | -0.023 (0.042) |
| Tobin's Q | 0.112*** (0.005) | 0.131*** (0.007) | 0.291*** (0.028) | 0.357*** (0.035) |
| Industry fixed effects | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | 0.210*** (0.037) | 0.118** (0.056) | 0.565*** (0.145) | 0.589*** (0.177) |
| Observations | 14,045 | 5709 | 610 | 324 |
| R ² | 0.111 | 0.088 | 0.559 | 0.721 |
| Chi ² | 1018.5 | 559.5 | 225.6 | 259.5 |

This table shows the outcomes of cross-sectional time-series two-step GLS regressions of Return on Assets (ROA) on the governance score, four individual governance standards and control variables. It reports the standardized coefficients on the independent variables as well as standard errors in parentheses.

*Significance at the 0.1 level.

**Significance at the 0.05 level.

***Significance at the 0.01 level.

Table 3. Two-step GLS regressions of governance factors on return on assets.

Overall, we find that stronger governance (as measured by the overall Governance Score) is associated with better financial performance among non-cross-listed EM firms, but we find no evidence of an impact on the performance of cross-listed ADRs. Also, there is no evidence of a positive effect by any of the individual governance rules on the performance of EM firms. CEO Duality, however, appears to be associated with weaker performance among the ADR firms over time.

4.2. The moderating effect of risk on governance-performance relationship

We examine the results of hypotheses 6 and 7 using the interaction terms as specified in Eqs. (3) and (4). **Table 4** provides the estimates of the regressions that include interactions between Governance Score and the four governance indicators with a moderating variable, Beta. Model (1) indicates that, when the moderating variable is introduced, the direct effect of the Governance Score on firm performance remains significant and positive ($p < 0.05$), while the interaction term has a significant but negative association with performance in EM firms ($p < 0.05$), providing evidence for hypothesis 6. Similarly, in Model (2) we observe that, although the direct effects of all four governance indicators are not significant, the moderating effect of beta on Ethics Policy, Number of Committees and performance are significant and negative, providing evidence in support of hypotheses 7c and 7d. The results further reveal that the independent variables Ethics Policy and Number of Committees are significant, conditional on the inclusion of the interaction variable, Beta into the model. Nevertheless, we find no evidence in support of the moderating effect of risk on the governance-performance relationship in Models (3) and (4) among the ADR firms.

| | EM firms | | ADRs | |
|----------------------------|---------------------|----------------------|-------------------|-------------------|
| | (1) | (2) | (3) | (4) |
| Governance score | 0.010** (0.005) | | 0.009 (0.014) | |
| Committees | | 0.005 (0.006) | | 0.006 (0.028) |
| Independent directors | | -0.002 (0.012) | | 0.028 (0.037) |
| CEO duality | | 0.011 (0.017) | | -0.108 (0.080) |
| Ethics policy | | -0.001 (0.017) | | 0.037 (0.083) |
| Beta | 0.061 (0.052) | -0.880 (1.129) | 2.303 (1.728) | 5.902 (8.043) |
| Beta*governance score | -0.396** (0.162) | | -0.902 (0.935) | |
| Beta*independent directors | | -0.350 (0.457) | | -2.227 (3.350) |
| Beta*CEO duality | | 0.618 (0.888) | | -3.308 (5.837) |
| Beta*ethics policy | | -2.063*** (0.785) | | -4.196 (7.735) |

| | EM firms | | ADRs | |
|------------------------|----------------------|----------------------|----------------------|----------------------|
| | (1) | (2) | (3) | (4) |
| Beta*committees | | −0.874*** (0.241) | | −0.006 (2.570) |
| Leverage | −0.090*** (0.006) | −0.091*** (0.008) | −0.120*** (0.029) | −0.184*** (0.032) |
| Firm Size | 0.061*** (0.009) | 0.081*** (0.012) | 0.013 (0.039) | 0.030 (0.038) |
| Tobin's Q | 0.112*** (0.005) | 0.131*** (0.007) | 0.290*** (0.027) | 0.339*** (0.032) |
| Industry fixed effects | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | 0.204*** (0.037) | 0.121** (0.055) | 0.627*** (0.134) | 0.701*** (0.161) |
| Observations | 14,045 | 5709 | 610 | 324 |
| R ² | 0.116 | 0.096 | 0.554 | 0.745 |
| Chi ² | 1044.3 | 595.5 | 245.0 | 326.6 |

This table shows the outcomes of cross-sectional time-series two-step GLS regression model for the moderating effect of risk (measured by beta) on the relationship between return on assets (ROA) and the governance score, as well as four individual governance standards. It reports the standardized coefficients on the independent variables as well as standard errors in parentheses.

*Significance at the 0.1 level.

**Significance at the 0.05 level.

***Significance at the 0.01 level.

Table 4. The moderating effect of risk on governance-performance relationship.

Overall, the results indicate that the existence of a formal ethics policy in the emerging markets may signal a sincere commitment to a strengthened governance structure, which improves the profitability of EM firms. However, in the presence of relatively high market risk (i.e., Beta), the performance enhancing attributes of an ethics policy are mitigated. Given that Governance Score is a continuous variable while the Number of Committees is a categorical variable, we provide graphical analyses to depict the interaction between risk (Beta) and the Governance Score as well as the interaction between risk and the Number of Committees in **Figures 1** and **2**, respectively. **Figure 1** shows that lower risk EM firms enjoy greater benefits in the form of performance from more rigorous governance standards than the higher risk firms. Similarly, **Figure 2** reveals that lower risk EM firms see greater performance gains from adding committees.

4.3. Supplementary analyses

Given the frequent use of market capitalization of equity as an alternative performance measure in the accounting and finance literature, we assess the robustness of the governance-performance

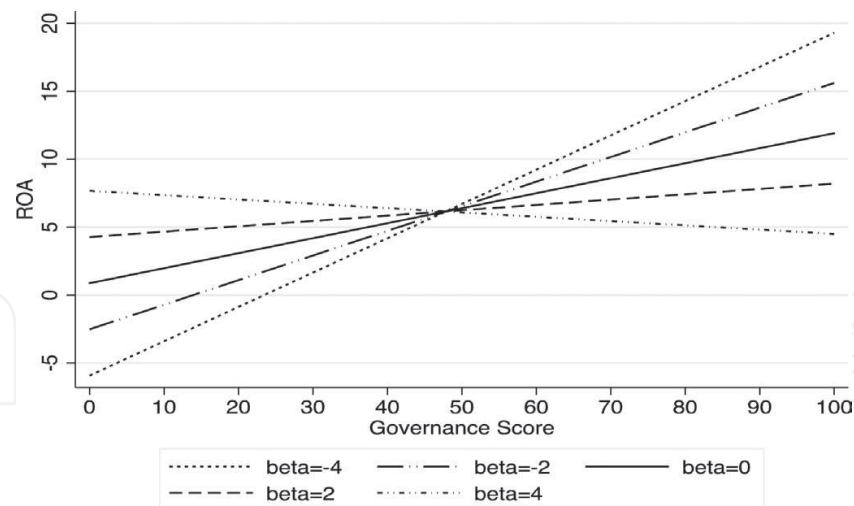


Figure 1. The moderating effect of risk on Governance Score-Performance relationship in the EMs.

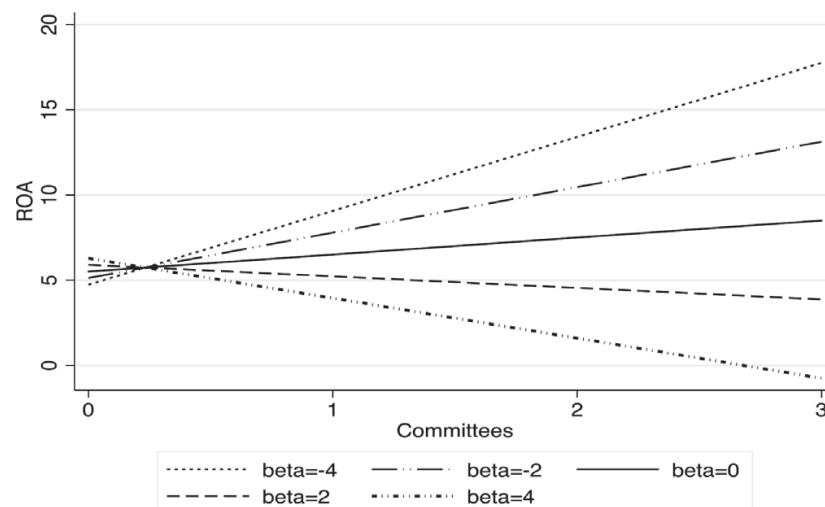


Figure 2. The moderating effect of risk on Committees-Performance relationship in the EMs.

models with regard to our measure of financial performance by substituting the market-to-book value of equity ratio (M/B) for ROA [61–63]. Specifically, M/B is calculated as the ratio of the total market value of a firm's equity to its book value of equity; it is interpreted as the multiple by which the market values a firm's net assets. **Table 5** provides the results of estimating the models using M/B as the relevant performance metric. Results reveal that the positive effect of the Governance Score on performance remains significant ($p < 0.10$) for EM firms [Model (1)] and insignificant for the cross-listed ADRs [Model (3)]. An examination of the impact of the individual governance variables on M/B indicates that the parameter estimate on CEO Duality becomes negative and significant ($p < 0.05$) for EM firms [Model (2)], suggesting that CEO Duality weakens corporate governance mechanisms and reduces the long-term potential wealth creation of the firm. In line with the extant literature, the results also show that an increase in Independent Directors ($p < 0.05$) increases firm value [36]. In contrast, but consistent with Aebi et al. [8], we find a negative relationship between firm performance and the specific

corporate governance variables, Number of Committees ($p < 0.10$) and Ethics Policy ($p < 0.01$) for cross-listed ADRs [Model (4)].

The equity of cross-listed firms are offered on the market as Level 1, 2 or 3 ADRs. Level 1 ADRs are traded over-the-counter and require the least amount of compliance and regulatory oversight by the SEC. Level 2 and 3 ADRs are required to adhere to all of the financial reporting standards mandated by SOX (2002). If compliant, level 2 and 3 ADRs trade on the major US stock exchanges (i.e., NASDAQ and NYSE). Given the regulatory differences between level 1

| | EM firms | | ADRs | |
|------------------------|----------|----------|----------|-----------|
| | (1) | (2) | (3) | (4) |
| Governance score | 0.011* | | 0.003 | |
| | (0.006) | | (0.017) | |
| Committees | | -0.005 | | -0.060* |
| | | (0.007) | | (0.033) |
| Independent directors | | -0.011 | | 0.082** |
| | | (0.015) | | (0.040) |
| CEO duality | | -0.044** | | -0.018 |
| | | (0.021) | | (0.079) |
| Ethics policy | | -0.010 | | -0.259*** |
| | | (0.020) | | (0.089) |
| Leverage | 0.021*** | -0.005 | 0.003 | 0.047 |
| | (0.007) | (0.010) | (0.040) | (0.043) |
| Firm size | 0.008 | 0.045*** | 0.031 | 0.061 |
| | (0.009) | (0.012) | (0.053) | (0.047) |
| Tobin's Q | 0.745*** | 0.826*** | 0.913*** | 0.999*** |
| | (0.007) | (0.009) | (0.036) | (0.040) |
| Industry fixed effects | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | 0.004 | -0.062 | -0.449** | -0.686*** |
| | (0.035) | (0.052) | (0.184) | (0.194) |
| Observations | 14,045 | 5709 | 610 | 324 |
| R ² | 0.793 | 0.802 | 0.869 | 0.932 |
| Chi ² | 15934.0 | 10435.4 | 1004.5 | 1186.0 |

This table shows the outcomes of cross-sectional time-series two-step GLS regressions of market value (measured by market-to-book ratio) on the governance score, four individual governance standards and control variables. It reports the standardized coefficients on the independent variables as well as standard errors in parentheses.

*Significance at the 0.1 level.

**Significance at the 0.05 level.

***Significance at the 0.01 level.

Table 5. Two-step GLS regressions of governance factors on market value.

and level 2 and 3 ADRs, we test the sensitivity of our results on the ADR sample. Eqs. (1) and (2) are re-estimated using a restricted sample that includes only level 2 and 3 ADRs. **Table 6** presents the results of Models (1) and (2) using ROA as the performance measure (dependent variable) and Models (3) and (4) using M/B. A comparison of the results of Models (3) and (4) using the full sample (in **Table 4**) with Models (1) and (2) using the restricted sample (in **Table 6**), reveals that both the sign and the statistical significance of the parameter estimates remain similar with regard to the governance-performance relationship when level 1 ADRs are excluded from the sample. Therefore, using ROA as the performance measure, level 2 and 3 ADRs exhibit no evidence of improved performance given an enhanced governance structure.

When M/B is employed as a performance measure, a comparison of Model (4) in **Table 6**, using the restricted sample, with Model (4) in **Table 5**, using the full sample, reveals that the statistical significance of some of the parameter estimates decrease or disappear. When level 1 ADRs are excluded from the sample, the variables Independent Directors and Ethics Policy become statistically insignificant, while Number of Committees continues to have a negative and statistically significant impact on market value for level 2 and 3 ADRs. In addition, similar to the findings of Model (3) in **Table 5** that uses the full model, governance score still remains insignificant in Model (3) (**Table 6**) when level 1 ADRs are excluded from the sample.

| | ROA | | Market value | |
|------------------------|----------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| Governance score | 0.020 (0.015) | | 0.010 (0.020) | |
| Committees | | -0.055 (0.037) | | -0.099** (0.047) |
| Independent directors | | 0.008 (0.040) | | 0.078 (0.051) |
| CEO duality | | -0.095 (0.073) | | 0.101 (0.093) |
| Ethics policy | | -0.079 (0.095) | | -0.204 (0.125) |
| Leverage | -0.097*** (0.033) | -0.049 (0.040) | 0.069 (0.046) | 0.089 (0.054) |
| Firm size | -0.088* (0.049) | -0.038 (0.063) | -0.163** (0.068) | -0.126 (0.082) |
| Tobin's Q | 0.264*** (0.036) | 0.313*** (0.047) | 0.847*** (0.049) | 0.941*** (0.062) |
| Industry fixed effects | Yes | Yes | Yes | Yes |
| Country fixed effects | Yes | Yes | Yes | Yes |
| Constant | 0.359** (0.181) | 0.220 (0.206) | -0.292 (0.248) | -0.274 (0.266) |

| | ROA | | Market value | |
|------------------|-------|-------|--------------|-------|
| | (1) | (2) | (3) | (4) |
| Observations | 358 | 212 | 358 | 212 |
| R ² | 0.679 | 0.698 | 0.883 | 0.909 |
| Chi ² | 179.5 | 157.1 | 593.1 | 563.0 |

This table shows the outcomes of cross-sectional time-series two-step GLS regressions of return on assets (ROA) and market value (measured by market-to-book ratio) on the governance score, four individual governance standards and control variables for the level 2 and 3 ADRs. It reports the standardized coefficients on the independent variables as well as standard errors in parentheses.

*Significance at the 0.1 level.

**Significance at the 0.05 level.

***Significance at the 0.01 level.

Table 6. Two-step GLS regressions of governance factors on ROA and market value for level 2&3 ADRs.

5. Conclusion

This study examines the association between corporate governance and financial performance among cross-listed ADRs and non-cross listed EM firms. It appears unlikely that cross-listed ADRs, which are required to submit to regulatory oversight and must remain in compliance with the US governance rules, experience an improvement in performance as a result of the enhanced governance structure. In fact, ADR firms do not appear to perform any better than non-cross listed EM firms, which do not abide by these rules. The study further investigates whether market risk (i.e., Beta) has a moderating effect on the governance-performance relationship and finds that risk reduces the positive association between governance and performance in the emerging markets.

In this study, a two-step Generalized Least Squares (GLS) random effects model is employed to capture both cross-sectional and time-series variation in the data. The results of estimating various models reveal that enhanced governance leads to improved financial performance among non-cross-listed EM firms, when the strength of a firm's corporate governance is measured as a cumulative score (in this article the variable Governance Score). However, there is no evidence that any of the individual governance measures (i.e., CEO Duality, Independent Directors, Ethics Policy and Committees) affect EM firm performance, when performance is measured as ROA. Also, consistent with findings presented in the extant literature [10], we find that a cumulative corporate governance score provides no evidence of an impact on the ROA of cross-listed ADR firms. Still, among the individual governance indicator variables, CEO Duality produces a mitigating effect on ROA (performance).

When the market-to-book equity ratio (M/B) is employed as the measure of performance, ADRs with a formal ethics policy and greater established committees exhibit a reduction in their performance. In contrast, an enhanced governance structure improves the M/B of non-cross-listed EM firms, and also restricting the dual role of the CEO appears to have a positive effect. Finally results of the study also show that market risk is a factor that negatively affects

the governance-performance relationship among EM firms. That is, higher market-risk firms fail to experience an improvement in their financial performance even while applying US best practice governance rules.

In general, the results indicate that non cross-listed EM firms voluntarily “bond” themselves to US best practice governance rules in an effort to become integrated into the global financial market; presumably to attract capital and customers. Non-cross-listed EM firms appear to experience a benefit from building a stronger governance structure and it is reflected in better performance over time. Nevertheless, enhancing the governance structure of a firm ultimately does not appear to compensate for the presence of risk – higher risk firms experience substantially less reward for stalwart governance. In this regard, reducing the incidence of CEO duality looks like an effective solution to protect investors and creditors from risk-taking activities of overly powerful managers and to increasing the impact on long-term performance.

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